

Appln. No. 09/766,972

Attorney Docket No. 10541-1959

I. Listing of Claims

1. (Currently Amended) A thermally energy efficient vehicle comprising:

a vehicle structure, wherein said vehicle structure includes generally interconnected structural members that form a frame for the vehicle and generally planar interconnected panels that define a shape of the vehicle, wherein a thermally efficient structural material is utilized for said structural members to reduce a thermal mass of said structural members;

a low transmittance glass window positioned within window portions of said vehicle structure, wherein said low transmittance glass window increases a thermal resistance of the vehicle;

an energy efficient insulator attached to an inside portion of said vehicle structure to increase a thermal resistance of the vehicle, the energy efficient insulator including a first wall surface and a second wall surface defining a gas-filled cavity, the gas-filled cavity extending substantially completely along the first and second wall surfaces; and

an energy efficient thermal management system providing exterior thermal management for powertrain cooling within an engine compartment and interior thermal management for climate control within an occupant compartment for the vehicle, wherein said energy efficient thermal management system consumes less thermal energy as a result of the increased thermal resistance of the vehicle.

2. (Cancelled)

3. (Cancelled)

4. (Previously Presented) A thermally energy efficient vehicle as set forth in claim 1 wherein said energy efficient insulator provides a thermal barrier and an acoustic barrier.

5. (Cancelled)

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6. (Previously Presented) A thermally energy efficient vehicle as set forth in claim 1 wherein said low transmittance glass window includes two parallel sheets of glass defining a second gas-filled cavity, to improve a thermal resistance of the low transmittance glass.

7. (Original) A thermally energy efficient vehicle as set forth in claim 6 wherein said low transmittance glass includes a solar reflective film attached to an outside surface of one of the two parallel sheets of glass.

8. (Previously Presented) A thermally energy efficient vehicle as set forth in claim 6 wherein said low transmittance glass includes a desiccant material disposed within the second gas-filled cavity.

9. (Previously Presented) A thermally energy efficient vehicle as set forth in claim 1 wherein said low transmittance glass window is made from a glass/polycarbonate composite material.

10. (Original) A thermally energy efficient vehicle as set forth in claim 1 wherein a thermal energy consumption capacity of the energy efficient thermal management system is reduced by increasing the thermal resistance of the vehicle.

11. (Currently Amended) A thermally energy efficient vehicle comprising:

a vehicle structure, wherein said vehicle structure includes generally interconnected structural members that form a frame for the vehicle and generally planar interconnected panels that define a shape of the vehicle, wherein a thermally efficient structural material is utilized for said structural members to reduce a thermal mass of the vehicle;

a low transmittance glass window positioned within window portions of said vehicle structure, wherein said low transmittance glass window includes two parallel sheets of glass defining a window gas-filled cavity, to increase a thermal resistance of the vehicle;

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an energy efficient insulator attached to an inside portion of said vehicle structure to increase a thermal resistance of the vehicle, the energy efficient insulator including a first wall surface and a second wall surface defining a second an insulator gas-filled cavity, the insulator gas-filled cavity extending substantially completely along the first and second wall surfaces; and

an energy efficient thermal management system providing exterior thermal management for powertrain cooling within an engine compartment and interior thermal management for climate control within an occupant compartment for the vehicle, wherein a thermal energy consumption capacity of said energy efficient thermal management system is decreased since said energy efficient thermal management system consumes less thermal energy resulting from the increased thermal resistance and reduced thermal mass of the vehicle.

12. (Cancelled)

13. (Previously Presented) A thermally energy efficient vehicle as set forth in claim 11 wherein said energy efficient insulator provides a thermal barrier and an acoustic barrier.

14. (Cancelled)

15. (Original) A thermally energy efficient vehicle as set forth in claim 11 wherein said low transmittance glass includes a solar reflective film attached to an outside surface of one of the two parallel sheets of glass.

16. (Currently Amended) A thermally energy efficient vehicle as set forth in claim 11 wherein said low transmittance glass includes a desiccant material disposed within the second window gas-filled cavity.

17. (Previously Presented) A thermally energy efficient vehicle as set forth in claim 11 wherein said low transmittance glass window is made from a glass/polycarbonate composite material.

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18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Currently Amended) A thermally energy efficient vehicle as set forth in claim 1, ~~the energy efficient insulator further including a second surface defining the gas-filled cavity,~~ wherein the first wall surface and the second wall surface are substantially parallel with each other.

22. (Previously Presented) A thermally energy efficient vehicle as set forth in claim 21, wherein the gas-filled cavity includes argon.

23. (Currently Amended) A thermally energy efficient vehicle as set forth in claim 11, ~~the energy efficient insulator further including a second surface defining the gas-filled cavity,~~ wherein the first wall surface and the second wall surface are substantially parallel with each other.

24. (Currently Amended) A thermally energy efficient vehicle as set forth in claim 23, wherein the insulator gas-filled cavity includes argon.